

**CLAIMS**

What is claimed is:

- 1 1. A thermal interface material, comprising:
  - 2 a plurality of thermally conductive, malleable fibers arranged in a pattern, the fibers
  - 3 of the pattern in contact with each other, when compressed against a first surface.
  
- 1 2. The thermal interface material of Claim 1, further comprising:
  - 2 a thermal medium, the medium encompassing the fibers, the thermal medium being
  - 3 malleable and deforming to fill irregularities when the fibers are compressed against a first
  - 4 surface.
  
- 1 3. The thermal interface material of Claim 1, wherein the fibers include one of the
- 2 following: a metal, a metal compound, or a metal alloy.
  
- 1 4. The thermal interface material of Claim 1, wherein the fibers are a non-metal.
  
- 1 5. The thermal interface material of Claim 4, wherein the non-metal includes carbon or
- 2 graphite.

1 6. The thermal interface material of Claim 1, further comprising:  
2 an adhesive applied to the fibers, the adhesive affixing the fibers in position on a first  
3 surface until the fibers are compressed against the first surface.

1 7. The thermal interface material of Claim 1, wherein the pattern includes a random  
2 pattern.

1 8. The thermal interface material of Claim 1, wherein the pattern includes a stacked  
2 pattern.

1 9. The thermal interface material of Claim 1, wherein the pattern includes a woven  
2 pattern.

1 10. A method, comprising:  
2 providing a plurality of thermally conductive, malleable fibers in a pattern;  
3 positioning the plurality of fibers between a first surface and a second surface; and  
4 compressing the plurality of fibers between the first and second surfaces, the  
5 compression deforming the fibers into contact with each other and into contact with the first  
6 surface and second surface.

1 11. The method of Claim 10, wherein the first surface is a thermal plate and wherein the  
2 second surface is a heat source.

1 12. The method of Claim 10, wherein the pattern includes a random pattern.

1 13. The method of Claim 10, wherein the pattern includes a stacked pattern.

1 14. The method of Claim 10, wherein the pattern includes a woven pattern.

1 15. The method of Claim 10, further comprising:  
2 encompassing the fibers in a thermal medium, the thermal medium being malleable,  
3 the thermal medium deforming to fill irregularities when compressed against a first surface.

1 16. The method of Claim 10, wherein the fibers include one of the following: a metal, a  
2 metal compound, a metal alloy.

1 17. The method of Claim 10, wherein the fibers are a non-metal.

1 18. The method of Claim 17, wherein the non-metal includes carbon or graphite.

1 19. The method of Claim 10, further comprising:

2               applying an adhesive to the fibers to affix the fibers in position on the first surface  
3               until the fibers are compressed against the first surface.

1   20.   An apparatus, comprising:  
2               a plurality of thermally conductive, malleable fibers defining a pattern positioned  
3               against a first surface; and  
4               means for compressing the plurality of fibers between the first surface and second  
5               surface, the compression deforming the fibers into contact with each other and with said first  
6               surface and said second surface.

1   21.   The apparatus of Claim 20, wherein the first surface is a thermal plate and wherein  
2               the second surface is a heat source.

1   22.   The apparatus of Claim 20, wherein the fibers are encompassed in a thermal  
2               medium. The medium acting and being malleable, the thermal medium deforming to fill  
3               irregularities when the fibers are compressed against the first surface.

1   23.   The apparatus of Claim 20, wherein the fibers include one of the following: a metal,  
2               a metal compound, or a metal alloy.

1   24.   The apparatus of Claim 20, wherein the fibers are a non-metal.

- 1 25. The apparatus of Claim 20, wherein the non-metal includes carbon or graphite.
- 1 26. The apparatus of Claim 20, wherein the pattern includes a random pattern.
- 1 27. The apparatus of Claim 20, wherein the pattern includes a stacked pattern.
- 1 28. The apparatus of Claim 20, wherein the pattern includes a woven pattern.

1 25. The apparatus of Claim 20, wherein the non-metal includes carbon or graphite.